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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,269	04/04/2005	Walter Trakowski	HM-599PCT	4872
40570 7590 04/06/2007 FRIEDRICH KUEFFNER 317 MADISON AVENUE, SUITE 910 NEW YORK, NY 10017			EXAMINER LAMB, BRENDA A	
			ART UNIT	PAPER NUMBER
			1734	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/507,269

Applicant(s)

TRAKOWSKI ET AL.

Examiner

Brenda A. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/18/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following terms lacks proper antecedent basis: "the inductor (5, 5a, 5b)" at line 15 of claim 1; and "the induction coils (7)" at line 3 of claim 5; and "the induction coil (7)" at line 6 of claim 6. The recitation in claim 1 that the device is coating "metal strands (1), especially steel strip" is confusing since it is unclear whether one is coating multiple strand or a single strip. The recitation that the inductor has at least two correction coils in claim 8 is confusing since it is unclear how the correction coils which are part of the means for guiding the metal strand (1) as set forth in claim 1 relates to the correction coils for the inductor (5) set forth in claim 8.

Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The recitation in claim 8 that the means for guiding the metal strand comprise at least one pair of guide rollers does not further claim 1 which limits the means for guiding the metal strand with the term "consist of" <sup>or is limited</sup> to at least two correction coils.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shunk in view of Richter, Garnier et al and Heinemann et al.

Shunk et teaches the design for the hot dip coating of metal strands (i), especially steel strip, the device comprising a tank 1 that contains the molten coating metal 2 and an upstream guide channel such that a metal strand can be guided vertically through the guide channel and the tank thereby coating the metal strand (i), wherein, in the area of the guide channel, an electromagnetic inductor is installed, which can induce induction currents in the coating metal for holding back the coating metal in the tank by means of an electromagnetic blocking field, <sup>wherein</sup> ~~which~~ induction currents interact with the electromagnetic blocking field to exert an electromagnetic force, and such that the device has means for guiding the metal strand in the guide channel, which consist of

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at least two correction coils for controlling the position of the metal strand in the guide channel in the direction (N) normal to the surface of the metal strand. Shunk et al fails to teach that the inductor is connected to electric supply means that supplies the inductor with alternating current with a frequency (f) that is less than 500 Hz, such that the supply means supplies the inductor with single-phase alternating current. However, it would have been obvious to modify the Shunk et al apparatus by providing as the supply source one which is an alternating current since it is known to supply alternating current such as taught by Heinemann et al, Garnier et al and Richter which has a single phase to electromagnetic coil surrounding <sup>a conduit</sup> to control flow from a molten metal container. Further, it would have been obvious given the modifications of the Shunk et al apparatus as discussed above to optimize the frequency of the applied alternating current such that is within the range set forth in Heineman et and Garnier et al ( see the second example at column 7 of Heineman et al, lower frequency range set forth by Garnier et al about 500 which encompasses a frequency range at the upper end of a frequency of less than 500) since Heinemann et al, Garnier et al and Richter teaches optimizing the frequency of an alternating current applied to electromagnetic coil dependent a variety of factor which includes flow rate of the molten metal (see column 5 lines 46-62 of Richter), type of metal (see column 5 lines 14-24 of Garnier et al and desired to degree of pinching or restriction of flow (See column 7 lines 12-24 and column 6 lines 59-66 of Heinnemann et al). With respect to claim 3, Shunk et al teaches that inductor coil for the inductor is arranged on each side of the channel. With respect to claims 2 and 9, it would have been prima facie obvious that the supply source for the

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modified Shunk apparatus is capable of producing a frequency within the scope of the claims given the wide range of frequencies of the applied to electromagnetic coil as disclosed in Heineman et al and Garnier et al. With respect to claim 8, Shunk et al shows in his Figure that the correction coils are arranged side by side in a row on either side of the substrate.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schunk in view of Richter, Garnier et al and Heinemann et al in further view of Tada et al 5,965,210.

Shunk et al, Richter, Garnier et al and Heinemann et al are applied for the reasons noted above but fails to teach a pair of guide rollers below the guide channel. However, it would have been obvious given the modified Shunk et al apparatus to a pair of guide rollers below the guide channel such as taught by Tada et al for the obvious advantage of greater control of the positioning of the strip.

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

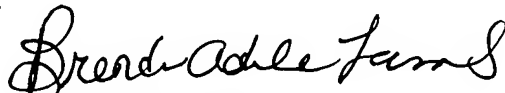
Claims 5-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda A. Lamb whose telephone number is (571) 272-1231. The examiner can normally be reached on Monday-Tuesday and Thursday-Friday. The examiner can also be reached on alternate Wednesdays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla, can be reached on (571-272-1231. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Brenda A Lamb".

Brenda A Lamb  
Examiner  
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